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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,119	03/12/2004	Mo-Han Fong	NRT.0119US (16632RRUS02U)	9093
21906	7590	10/20/2005	EXAMINER	
TROP PRUNER & HU, PC 8554 KATY FREEWAY SUITE 100 HOUSTON, TX 77024			FIGUEROA, MARISOL	
			ART UNIT	PAPER NUMBER
			2681	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,119

Applicant(s)

FONG ET AL.

Examiner

Marisol Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The information disclosure statement IDS filed on October 21, 2004 has been considered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 7-9** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner cannot ascertain whether the trigger conditions recited in claims 7-9 comprises a single trigger condition of an alternative of trigger conditions because the claim language is indefinite. For example, claim 7 recites the limitation "wherein detecting whether one of plural conditions has occurred comprises detecting for the following condition", this limitation suggests a single trigger condition but then the claims further recite the condition as "a maximum time duration has elapsed, and a buffer to contain data to transmit over the wireless link is not empty" which are plural conditions. The examiner interprets the claims to each comprise an alternative of trigger conditions.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an

application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1, 2, 5-10, and 20** are rejected under 35 U.S.C. 102(e) as being anticipated by **Hsu et al. US 2005/0111358 A1**.

Regarding claim 1, Hsu discloses a method for use in a wireless communications network, comprising:

in a reverse wireless link, communicating information relating to status of a buffer in a mobile station (P.0017; P.0022; P.0037; P.0042, lines 7-12; P.0049-0050; a traffic volume measurement and reporting TVMAR is generated at the mobile station and returned to network which includes information about the buffer status of the mobile station); and

in the reverse wireless link, communicating information relating to a data rate used by the mobile station when transmitting over the reverse wireless link (P.0017-0018, lines 1-3).

Regarding claim 2, Hsu discloses the method of claim 1, wherein communicating information relating to the status of the buffer comprises communicating information relating to an occupancy of a data buffer (P.0050).

Regarding claim 5, Hsu discloses the method of claim 1, further comprising detecting whether a trigger condition has occurred, wherein communicating the information relating to the status of the buffer and the information relating to the data rate is performed in response to occurrence of the trigger condition (P.0023; P.0053; the mobile station upon detection of triggering events, e.g. number of packets exceeding a high threshold or being less than a low threshold, generates and sends a TVMAR report that includes information about the mobile station's buffer status).

Regarding claim 6, Hsu discloses the method of claim 5, wherein detecting whether the trigger condition has occurred comprises detecting whether one of plural trigger conditions has occurred (P.0023; P.0053).

Regarding claim 7, Hsu discloses the method of claim 6, wherein detecting whether one of plural trigger conditions has occurred comprises detecting for the following condition: a maximum time duration has elapsed. (P.0052; P.0059; the information about the status of the buffer and data rate is communicated at selected intervals, i.e. duration of time, therefore when the selected interval of time is reached the reports are generated and sent to the network, in the present invention the time interval is set to 20 ms which could be interpreted as a maximum time duration or a minimum time duration as well).

Regarding claim 8, Hsu discloses the method of claim 7, wherein detecting whether one of plural trigger conditions has occurred comprises detecting for the following condition: a minimum time duration has elapsed (P.0052; P.0059; the information about the status of the buffer and data rate is communicated at selected intervals, i.e. duration of time, therefore when the selected interval of time is reached the reports are generated and sent to the network, in the present invention the time interval is set to 20 ms which could be interpreted as a maximum time duration or a minimum time duration as well).

Regarding claim 9, Hsu discloses the method of claim 8, wherein detecting whether one of plural trigger conditions has occurred comprises detecting for the following condition: a predetermined time duration has elapsed from a time when information relating to a status of a buffer in the mobile station and information relating to a data rate over the reverse wireless link was last sent (P.0052; P.0059; the information about the status of the buffer and data rate is communicated at selected intervals, i.e. duration of time, therefore each time a selected interval of

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time is reached counting from the last time the report was sent, a new report is generated and sent to the network).

Regarding claim 10, Hsu discloses the method of claim 1, wherein communicating the information relating to a status of a buffer in the mobile station and information relating to a data rate over the reverse wireless link comprises communicating the information relating to the status of the buffer and information relating to the data rate in a reverse request message (P.0017-P.0018; P.0042-0043; the mobile station sends a TVMAR report including information about the buffer status, data rate requested, and other parameters to the network, it is inherent to recognize that the information will be sent in a reverse request message since the report also forms a data-rate request to request a selective data rate at which the packet data is communicated).

Regarding claim 20, Hsu discloses a mobile station comprising:

an interface to communicate with a base station over a wireless link (P.0040, lines 1-2; the mobile station includes transceiver circuitry which is an interface to transmit and receive data to/from a base station);

a buffer to store data for communication over the wireless link to the base station (P.0043, lines 1-8; the mobile station inherently has a buffer since it reports information about its buffer status); and

a controller to send information relating to a status of the buffer and information relating to a data rate over the wireless link to the base station (P.0040, lines 3-4; P.0042; the controller includes an apparatus which creates a report to send to the base station that includes information about buffer status, requested data rate, etc.). Also see remarks about claim 1 above.

4. **Claims 14, 15, and 17-19** are rejected under 35 U.S.C. 102(e) as being anticipated by Odenwalder et al. US 2004/0160933 A1.

Regarding claim 14, Odenwalder discloses an article comprising at least one storage medium (P.0139) containing instructions that when executed cause a system in a wireless communications network to: communicate, in a reverse wireless link, a message having at least two fields that contain information indicative of a data rate for transmission by a mobile station in the reverse wireless link, the information based at least on one of buffer occupancy and power headroom (P.0085, lines 1-9; the mobile station sends a request for a reverse link transmission to a scheduling base station, the message includes information about buffer size, i.e. amount of data awaiting transmission, and the traffic-to-pilot (T/P) ratio the mobile station can support, note that the maximum T/P ratio sets a maximum data transmission rate {Chen et al. US 2005/0176456 A1; P.0056, lines 6-16; note: this reference is used only for definition purposes}, therefore the T/P ratio is an indication of a data rate for transmission by a mobile station).

Regarding claim 15, Odenwalder discloses the article of claim 14, wherein communicating the message in the reverse wireless link comprises communicating a message having a first field containing data rate information and a second field for indicating whether the data rate information in the first field is based on buffer occupancy or power headroom (P.0085, lines 1-9; the mobile station sends a request for a reverse link transmission to a scheduling base station, the message includes information about the buffer size, i.e. amount of data awaiting transmission, and the traffic-to-pilot (T/P) ratio the mobile station can support, note that the maximum T/P ratio sets a maximum data transmission rate {Chen et al. US 2005/0176456 A1; P.0056, lines 6-16; note: this reference is used only for definition purposes}, therefore the T/P ratio is an indication of a data rate for transmission by a mobile station).

Regarding claim 17, Odenwalder discloses the article of claim 14, wherein communicating the message in the reverse wireless link comprises communicating a message having a first field

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containing power-related data rate information and a second field containing buffer occupancy information (P.0085, lines 1-9; the send information about its buffer size and traffic-to-pilot ratio the mobile station can support, note that it is inherent that the T/P ratio is a power-related data rate because is a parameter related with signal strength of pilot signals).

Regarding claim 18, Odenwalder discloses the article of claim 14, wherein communicating the message in the reverse wireless link comprises communicating a message having a first field containing traffic-to-pilot ratio information, a second field containing buffer occupancy information, and a third field containing an identifier of at least one of a service instance and a service class associated with the buffer occupancy information (P.0085, lines 1-15; the mobile station also specify in the request message the quality of service, i.e. service class, for the data awaiting transmission that indicates the desired QoS for various data services).

Regarding claim 19, Odenwalder discloses the article of claim 14, wherein communicating the message in the reverse wireless link comprises communicating a reverse request message on a code-division multiple access (CDMA) 2000 reverse request channel (R-REQCH) (P.0085, lines 1-3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 3, 4, 11, and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hsu et al.** in view of **Odenwalder et al.**

Regarding claims 3 and 4, Hsu discloses the method of claim 1, but fails to disclose wherein communicating information relating to the data rate comprises communicating information relating to a maximum data rate supportable by the mobile station over the reverse wireless link and wherein communicating the maximum data rate supportable by the mobile station comprises communicating a traffic-to-pilot ratio to indicate the maximum data rate supportable by the mobile station. Odenwalder discloses a scheduled reverse link data transmission in which a mobile station sends an estimate of its buffer size, available power, and other parameters to the base station and the base station determines when the mobile station is allowed to transmit (P.0081). The mobile station uses the Reverse Request Channel (R-REQCH) to request from the scheduling base station a reverse link transmission of data, and one other parameter included in the request is the traffic-to-pilot (T/P) ratio that the mobile station can support (P.0085, lines 1-10), the T/P ratio sets a maximum transmission rate the mobile station can support (Chen et al. US 2005/0176456 A1; P.0056, lines 6-16; note: this reference is used only for definition purposes). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to communicate a maximum data rate, i.e. T/P ratio, supportable by the base station as suggested by Odenwalder, because the maximum data rate supportable by the mobile station is a well known parameter used for the network for determining when the mobile station is allowed to transmit its packets in the reverse link.

Regarding claim 11, Hsu discloses the method of claim 10, but fails to disclose wherein communicating the reverse request message comprises communicating the reverse request message on a reverse request channel (R-REQCH). Odenwalder teaches that a reverse request channel (R-

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REQCH) is used for the mobile station to request from the base station a reverse link transmission of data (P.0085, lines 1-3). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the mobile station to communicate a reverse request message, e.g. TVMAR report, on a reverse request channel as suggested by Odenwalder, because the reverse request channel is used for communicating parameters, e.g. buffer status and data rate, which are included in the TVMAR report and used at the base station for scheduling reverse link data transmission.

Regarding claim 12, the combination of Hsu and Odenwalder discloses the method of claim 11, Odenwalder further discloses wherein communicating the reverse request message comprises communicating the reverse request message containing a first field to represent a maximum traffic-to-pilot ratio, and a second field to represent a buffer status (P.0081; P.0085). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the mobile station to communicate a reverse request message comprising the fields of a maximum traffic-to-pilot (T/P) ratio and a buffer status as suggested by Odenwalder, because these two parameters are well known to be used by the network to determine when the mobile station is allowed to transmit.

Regarding claim 13, the combination of Hsu and Odenwalder discloses the method of claim 12, Hsu further discloses wherein communicating the reverse request message comprises communicating the reverse request message containing a third field having an identifier to represent a service instance associated with the reverse request message (P.0057-0058; P.0062).

7. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Odenwalder et al.** in view of **Honkasalo US 6,510,148 B1**.

Regarding claim 16, Odenwalder discloses the article of claim 14, wherein communicating the message in the reverse wireless link comprises communicating a message having a first field containing power-related data rate information and a second field containing buffer information (P.0085, lines 1-9; the send information about its buffer size, i.e. amount of data awaiting transmission, and traffic-to-pilot ratio the mobile station can support, note that it is inherent that the T/P ratio is a power-related data rate because is a parameter related with signal strength of pilot signals). However, Odenwalder fails to disclose wherein the buffer information is buffer-related data rate information. Honkasalo teaches a mobile station that is able to determine a required data rate based on data buffer usage, i.e. occupancy, to send a request to a base station for granting access according to the required data rate (Abstract; col.3, lines 36-46). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to recognize that buffer occupancy may comprise a measure of buffer-related data rate information as suggested by Honkasalo, because it is known that a mobile station can determine a data rate required on data buffer usage, i.e. occupancy, and used as a factor to determine when to grant access to the transmission of packets stored in a mobile station's buffer.

8. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hsu et al.** in view of **Ho et al.** US 2005/0003843 A1.

Regarding claim 21, Hsu discloses the mobile station of claim 20, but fails to disclose wherein the controller is adapted to send data in the buffer on a reverse packet data channel (R-PDCH). Ho teaches that mobile stations transmits data to base stations via a set of reverse channel links that include both traffic channels and control channels, one of these channels in the reverse packet data channel R-PDCH (P.0038). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the controller to send data in the buffer on a

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reverse packet data channel R-PDCH as suggested by Ho, because the reverse packet data channel is one of the reverse channels in which a mobile station can transmit data.

9. **Claim 22 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hsu et al.** in view of **Ho et al.**, and further in view of **Odenwalder et al.**

Regarding claims 22 and 23, the combination of Hsu and Ho discloses the mobile station of claim 21, Hsu further discloses wherein the controller is adapted to send the information relating to the status of the buffer and information relating to the data rate over the wireless link in a reverse request message (P.0017-P.0018; P.0042-0043; the mobile station sends a TVMAR report including information about the buffer status, data rate requested, and other parameters to the network, it is inherent to recognize that the information will be sent in a reverse request message since the report also forms a data-rate request to request a selective data rate at which the packet data is communicated). However fails to disclose wherein the message is transmitted on a reverse request channel (R-REQCH) and is a code-division multiple access (CDMA 2000 R-REQCH). Odenwalder teaches that a reverse request channel (R-REQCH) is used for the mobile station to request from the base station a reverse link transmission of data (P.0085, lines 1-3, 23-26). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the mobile station to communicate a reverse request message, e.g. TVMAR report, on a reverse request channel as suggested by Odenwalder, because the reverse request channel is used for communicating parameters, e.g. buffer status and data rate, which are included in the TVMAR report and used at the base station for scheduling reverse link data transmission.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Marisol Figueroa
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